

CLAIMS

1. An optimization process for radio resources allocated to an MBMS service (Multimedia Broadcast/Multicast Service) broadcast by a source to a group of mobile terminals located in a limited geographic zone that is covered by at least one cellular telecommunication network, characterized in that the optimization process comprises the steps of:
 - counting the mobile terminals present in said geographic zone,
 - defining a first criterion representing a minimum level of reception quality by the mobile terminals of the service broadcast in said geographic zone,
 - defining a second criterion representing a distance between the broadcast source and the mobile terminals for which a reception of the broadcast service is optimal;
 - establishing a signalization connection between the cellular telecommunication network and mobile terminals located in a broadcast zone that fulfill the first and second criteria; and
 - transmitting the MBMS service to said mobile terminals.
2. A process according to claim 1, characterized in that said signalization connection is used to count the mobile terminals of a broadcast zone.
3. The process according to claim 2, characterized in that the process further comprises the steps of:

fixing a percentage of mobile terminals that should receive the MBMS service;

5 broadcasting signals having a determined power level;

 determining the percentage of mobile terminals that respond to signals that have been broadcast;

 as long as a fixed percentage of mobile terminals has not been reached, reducing an emission power level; and

10 if the fixed percentage of mobile terminals has been reached, broadcasting the MBMS service at the emission power level that has been reached.

4. The process according to anyone of claims 1 to 3, characterized in that said cellular telecommunication network is a UMTS network.

5. The process according to claim 4, characterized in that the first criterion that represents the minimum level of reception quality is determined according to a minimum level of received signal code power (RSCP) measured by code indicated by said cellular telecommunication network.

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6. The process according to claim 4, characterized in that the first criterion that represents the minimum level of reception quality is determined according to a signal-to-noise ratio E_c/N_0 that is indicated by said cellular telecommunication network.

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7. The process according to anyone of claims 1 to 3, characterized in that the said cellular telecommunication network is a GSM/GPRS network.

8. The process according to claim 7, characterized in that the first criterion that represents the minimum level of reception quality is determined according to a parameter (RX lev GSM).

9. A mobile terminal aimed at receiving an MBMS service broadcast by a source in a limited geographic zone that is covered by at least one cellular telecommunication network, characterized in that the mobile terminal comprises:

5 means for establishing connections with said cellular telecommunication network in the cases:

in which a reception quality level is below a minimum level defined by said cellular telecommunication network for said zone; and

10 in which a distance between the mobile terminal and the broadcast source is greater than a distance established in advance by said cellular telecommunication network.

10. The mobile terminal according to claim 9, characterized in that the mobile terminal establishes a connection with said cellular telecommunication network when a signal-to-noise E_c/N_0 is lower than a level that has been set in advance by said cellular telecommunication network, or when a minimum level of received signal code power RSCP is
5 lower than a preset value.